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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,478	06/07/2005	Satoshi Noma	Q88375	1764
23373 7590 04/04/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER TORRES, MARCOS L	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 04/04/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/538,478

**Applicant(s)**

NOMA, SATOSHI

**Examiner**

MARCOS L. TORRES

**Art Unit**

2617

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date 6-7-05 4-13-06

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) filed on 6-7-05 and 4-13-06 are being considered by the examiner.

### ***Drawings***

3. Figure 10 and 11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 5-8, 10-14, 16 and 19-20 are rejected under 35 U.S.C. 102(e) as being anticipated by the admitted prior art.

As to claim 1, the admitted prior art discloses a radio control device [RNC] which comprises user plane control means for controlling transfer of user data concerning a mobile terminal, and control plane control means for controlling transfer of signaling as a control signal, and which manages a radio base station (see par. 0008,0009,0003), characterized in that said control plane control means comprises paging group deciding means for deciding, in response to an external trigger for activating a paging process, and on the basis of terminal identification information contained in the external trigger, paging group information indicating a called party group to which a mobile terminal specified by the terminal identification information belongs (see par. 0013), and said user plane control means comprises radio channel setting information deciding means for deciding setting information for a paging radio channel generated by said radio base station, on the basis of the paging group information (see par. 0014-0017).

As to claim 5, the admitted prior art discloses the radio control device characterized in that said control plane control means further comprises means for creating a paging message (see par. 0013-0014).

As to claim 6, the admitted prior art discloses the radio control device characterized in that said control plane control means further comprises means for deciding paging area information for specifying a radio base station to which the paging message is to be transmitted (see par. 0018).

As to claim 7, the admitted prior art discloses the radio control device characterized in that said user plane control means transmits the paging message and setting information to said radio base station in accordance with the paging area information (see par. 0018, 0013-0015).

As to claim 8, the admitted prior art discloses the radio communication system [RAN 1] comprising: a radio base station [Node B 6-9] which terminates a mobile terminal via a radio channel (see par. 0002-0003); a radio control device [RNC] which comprises user plane control means for controlling transfer of user data concerning said mobile terminal, and control plane control means for controlling transfer of signaling as a control signal, and which manages said radio base station (see par. 0002-0003, 0008, 0009, 0013-0018); and a core network [3] which manages said radio control device (see par. 0002), characterized in that said control plane control means comprises paging group deciding means for deciding, in response to an external trigger for activating a paging process, and on the basis of terminal identification information contained in the external trigger, paging group information indicating a called party group to which a mobile terminal specified by the terminal identification information belongs (see par. 0008, 0009, 0013, 0014), and said user plane control means comprises radio channel setting information deciding means for deciding setting information for a paging radio channel generated by said radio base station, on the basis of the paging group information (see par. 0013-0018).

As to claim 10, the admitted prior art discloses the radio communication system characterized in that said control plane control means further comprises means for creating a paging message (see par. 0013-0014).

As to claim 11, the admitted prior art discloses the radio communication system characterized in that said control plane control means further comprises means for deciding paging area information for specifying a radio base station to which the paging message is to be transmitted (see par. 0018).

As to claim 12, the admitted prior art discloses the radio communication system characterized in that said user plane control means transmits the paging message and setting information to said radio base station in accordance with the paging area information (see par. 0018, 0013-0015).

As to claim 13, the admitted prior art discloses the radio communication system characterized in that said radio base station transmits the paging message to said mobile terminal on the basis of the setting information (see par. 0017-0018, 0013-0015).

As to claim 14, the admitted prior art discloses an operation control method of a radio control device [RNC] which comprises a user plane control unit for controlling transfer of user data concerning a mobile terminal (see par. 0008-0009), and a control plane control unit for controlling transfer of signaling as a control signal, and which manages a radio base station (see par. 0008-0009), characterized by comprising the steps of: deciding, in the control plane control unit, paging group information indicating a called party group to which a mobile terminal belongs, in response to an external trigger for activating a paging process, and on the basis of terminal identification information

contained in the external trigger; and deciding, in the user plane control unit, setting information for a paging radio channel generated by the radio base station, on the basis of the paging group information (see par. 0012-0018).

As to claim 16, the admitted prior art discloses an operation control method characterized by further comprising, in the control plane control unit, the step of creating a paging message (see par. 0013-0014).

As to claim 19, the admitted prior art discloses an operation control method characterized by further comprising, in the control plane control unit, the step of deciding paging area information for specifying a radio base station to which the paging message is to be transmitted (see par. 0018).

As to claim 20, the admitted prior art discloses an operation control method characterized by further comprising, in the user plane control unit, the step of transmitting the paging message and setting information to the radio base station in accordance with the paging area information (see par. 0018, 0013-0015).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
8. Claims 2, 9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art.

As to claim 2, the admitted prior art discloses the claimed invention except for said control plane control means and user plane control means are physically separated from each other. It would have been obvious to one having ordinary skill in the art at the time the invention was made to said control plane control means and user plane control means are physically separated from each other, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

As to claim 9, the admitted prior art discloses the claimed invention except for said control plane control means and user plane control means are physically separated from each other. It would have been obvious to one having ordinary skill in the art at the time the invention was made to said control plane control means and user plane control means are physically separated from each other, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

As to claim 15, the admitted prior art discloses the claimed invention except for said control plane control means and user plane control means are physically separated from each other. It would have been obvious to one having ordinary skill in the art at



the time the invention was made to said control plane control means and user plane control means are physically separated from each other, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

9. Claims 3-4 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Goldberg 20040063442.

As to claim 3, the admitted prior art does not specifically disclose that said paging group deciding means decides the paging group information by using a conversion table for the terminal identification information and paging group information. In an analogous art, Goldberg discloses a paging group deciding means decides the paging group information by using a conversion table for the terminal identification information and paging group information (see tables 2-3, par. 0021, 0022). Therefore, it would have been obvious to one of the ordinary skills in the art to use a conversion table for a fast an easy way to find the member UE's.

As to claim 4, the admitted prior art does not specifically disclose radio control characterized in that said radio channel setting information deciding means decides, as the setting information, transmission frame number information of the paging radio channel and paging identifier information corresponding to the paging group to be carried on the channel, on the basis of the paging group information and a present transmission frame number of a radio channel in said radio base station. In an analogous art, Goldberg discloses that said radio channel setting information deciding means decides, as the setting information, transmission frame number information

[page windows] of the paging radio channel and paging identifier information corresponding to the paging group to be carried on the channel, on the basis of the paging group information and a present transmission frame number of a radio channel in said radio base station (see par. 0025-0026; fig. 4). Therefore, it would have been obvious to one of the ordinary skills in the art to inform to the mobile device which frames to listen to avoid having the mobile device receiving all the frames, thereby saving battery power.

As to claim 16, the admitted prior art does not specifically that the step of deciding the paging group information comprises the step of deciding the paging group information by using a conversion table for the terminal identification information and paging group information. In an analogous art, Goldberg discloses that the step of deciding the paging group information comprises the step of deciding the paging group information by using a conversion table for the terminal identification information and paging group information (see tables 2-3, par. 0021, 0022). Therefore, it would have been obvious to one of the ordinary skills in the art to use a conversion table for a fast an easy way to find the member UE's.

As to claim 17, the admitted prior art does not specifically that operation control method characterized in that the step of deciding the radio channel setting information comprises the step of deciding, as the setting information, transmission frame number information of the paging radio channel and paging identifier information corresponding to the paging group to be carried on the channel, on the basis of the paging group information and a present transmission frame number of a radio channel in the radio

base station. In an analogous art, Goldberg discloses that the step of deciding the radio channel setting information comprises the step of deciding, as the setting information, transmission frame number information of the paging radio channel and paging identifier information corresponding to the paging group to be carried on the channel, on the basis of the paging group information and a present transmission frame number of a radio channel in the radio base station (see par. 0025-0026; fig. 4). Therefore, it would have been obvious to one of the ordinary skills in the art to inform to the mobile device which frames to listen to avoid having the mobile device receiving all the frames, thereby saving battery power.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARCOS L. TORRES whose telephone number is (571)272-7926. The examiner can normally be reached on 9:30 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-252-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marcos L Torres/  
Examiner, Art Unit 2617

/M. L. T./  
Examiner, Art Unit 2617

/George Eng/  
Supervisory Patent Examiner, Art Unit 2617